

**Response**

Serial No.: 09/955,604

Confirmation No.: 1214

Filed: 19 September 2001

For: TOOLS TO MANUFACTURE ABRASIVE ARTICLES

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**Remarks**

The Office Action mailed 30 December 2004 has been received and reviewed. Claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143, and 145-148 remain pending in the present application. Reconsideration and withdrawal of the rejections are respectfully requested.

**Claim Objection:**

Claim 23 was objected to as noted in the Office Action. Applicants submit that the asserted error was apparently the result of poor fax transmission. As a result, claim 23 as presented was correct. In an effort to address the fax transmission issues raised by the Examiner, Applicants have presented all pending claims in the currently required format of 37 C.F.R. § 121 (including status identifiers). Applicants respectfully request withdrawal of the objection to claim 23.

**Obviousness-Type Double Patenting Rejection**

Claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143, and 145-148 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17, 20, 21, 25-28, 33-54, 94-96, and 98-111 of copending application no. 09/520,032. Claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143, and 145-148 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,129,540. Upon an indication of otherwise allowable subject matter and in the event this rejection is maintained, Applicants will provide an appropriate response.

**The 35 U.S.C. §103 Rejection**

Claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143, and 145-148 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pieper et al. (U.S. Patent No. 5,152,917) in view of

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Rochlis (U.S. Patent No. 3,312,583) and either Larson (U.S. Patent No. 4,903,440) or Bloecker et al. (U.S. Patent No. 4,799,939). This rejection is respectfully traversed.

The present application is a continuation application that, through a line of applications, is entitled to the benefit of a September 13, 1993 effective filing date. As before, Applicants expressly reserve the right to establish a date of invention for the claims subject to this rejection before the effective date of Pieper et al. at a later time. At present, however, Applicants will address this rejection on its merits.

To support a *prima facie* case of obviousness under 35 U.S.C. §103(a), three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves, the knowledge generally available to one of ordinary skill in the art, or the nature of the problem involved, to modify a reference or combine reference teachings. Second, there must be a reasonable expectation of success, i.e., a reasonable expectation that the benefit result will be achieved. And third, the prior art reference(s) must teach or suggest all the elements and limitations of the claims of the Application. Applicants respectfully assert that the asserted obviousness rejection does not meet all these criteria, and therefore fails to set forth a *prima facie* case of obviousness.

The proposed rejection is premised on the following asserted motivation to modify/combine the cited references: "It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have to have (sic) modified the abrasive article production tool (a pile-like product) of Pieper et al with the cavities of varied dimensions as taught by the production tool of Rochlis because it enables a production tool capable of producing an abrasive article (pile like articles) with an almost indefinite number of specifically different physical characteristics, presenting many different visual, textural and other effects and it would have been obvious to desire cavities that produce such a varied collection of abrasive member sizes and shapes as taught by Larson and Bloecker because such variations achieve a high rate of cut and optimize cut rate, life of the abrasive article and surface finish on the workpiece as well as improve grinding performance." Office Action, p. 6 (December 30, 2004).

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Applicants respectfully submit that the asserted motivation to combine/modify the references does not meet the requirements for a *prima facie* case of obviousness. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP § 2143.01, p. 2100-131, 8<sup>th</sup> Ed. (Rev. 2, May 2004) (*citing In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

The inventions described in Pieper et al. were developed because the prior art abrasive articles "lack a high degree of consistency. If the abrasive article is made via a conventional process, the adhesive or binder system can flow before or during curing, thereby adversely affecting product consistency." Pieper et al., col. 1, lines 57-61. To address the problems of inconsistency, Pieper et al. describe abrasive articles and tools for making the abrasive articles that provide consistency or uniformity. "The more consistent an abrasive article of this invention, the more consistent will be the finish imparted by the abrasive article to the workpiece. An abrasive article having an ordered profile has a high level of consistency, since the height of the peaks of the abrasive composites will normally not vary by more than 10%." *Id.* at col. 7, lines 63-68. In other words, Pieper et al. teaches that consistency and uniformity are the objectives in the abrasive articles (and, therefore, the tools used to manufacture them). This interpretation is strengthened by a review of the figures of Pieper et al., all of which depict consistent, uniform abrasive articles/tools (except for those depicting the prior art).

Against that focus on consistency and uniformity, it is asserted in the Office Action that one of ordinary skill in the art would "have modified the abrasive article production tool . . . of Pieper et al with cavities of varied dimensions as taught by the production tool of Rochlis." Office Action, p. 6 (December 30, 2005). In other words, it is asserted that one of ordinary skill in the art would purposefully introduce variations contrary to the explicit teachings of Pieper et al. that variations and non-uniformities are to be avoided. Applicants respectfully submit that such an asserted modification "would render the prior art invention being modified [Pieper et al.]

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unsatisfactory for its intended purpose." As a result, the asserted motivation is negated and a *prima facie* case of obviousness has not been established.

The same arguments would, of course, apply to the asserted combination/modifications proposed in view of Larson and Bloecher because they also rely on modifications that would introduce variations or inconsistencies into the articles/tools of Pieper et al. The result is, again, that the asserted motivation is negated and a *prima facie* case of obviousness has not been established.

For at least the above reasons, Applicants respectfully submit that the rejection of claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143, and 145-148 over Pieper et al. in view of Rochlis, and further in view of either Larson or Bloecher does not meet the requirements for a *prima facie* case of obviousness. Reconsideration and withdrawal of the rejection are, therefore, respectfully requested.

**Claims 134, 135, 138, 139, 145, and 146**

Of the claims subject to this rejection, a subset, namely claims 134, 135, 138, 139, 145, and 146, recite that "the first, second, and third geometric shapes are pyramidal" (claim 134), that "the first, second, and third geometric shapes are truncated pyramidal" (claim 135), that "the first, second, and third rows are pyramidal" (claim 138), that "the first, second, and third rows are truncated pyramidal" (claim 139), that "the first, second, and third cavities are pyramidal" (claim 145), and that "the first, second, and third cavities are truncated pyramidal" (claim 146). In the context of their respective base claims, these dependent claims thus recite that the first, second, and third cavities of the different production are all in the shape of pyramids or truncated pyramids.

Applicants note that the Office Action does not identify how or why one of ordinary skill in the art would reach the inventions of these claims. Although Rochlis is cited as teaching cavities with different geometric shapes, Applicants note that no portion of Rochlis is actually identified as supporting the many different assertions presented. Further, no assertions are presented that Rochlis (or any of the other cited references – namely Larson and Bloecher) teach

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or suggest first, second, and third sets of pyramidal or truncated pyramidal cavities in the same tool. As a result, Applicants respectfully submit that a proper case of *prima facie* obviousness has not been established because a) none of the cited references teach or suggest all of the limitations of claims 134, 135, 138, 139, 145, and 146; and b) no suggestion or motivation is identified for the modifications required to reach the inventions of claims 134, 135, 138, 139, 145, and 146.

For at least the above reasons, Applicants respectfully submit that the rejection of claims 134, 135, 138, 139, 145, and 146 over Pieper et al. in view of Rochlis, and further in view of either Larson or Bloecher does not meet the requirements for a *prima facie* case of obviousness. Reconsideration and withdrawal of the rejection are, therefore, respectfully requested.

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**Summary**

It is respectfully submitted that the pending claims 23, 24, 30-32, 89, 90, 92, 93, 134-136, 138-143, and 145-148 are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for  
**HOOPMAN et al.**

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30 March 2005  
Date

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**CERTIFICATE UNDER 37 CFR §1.8:**

The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 30th day of March, 2005, at 10:51 a.m. (Central Time).

By: Rachel Gagliardi-Gebhardt  
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